In the Claims:

Claim 1, lines 4, 6, 7, and 8, after "fiducial", insert -- having a lambertian surface --.

Claim 1, line 5, before "responsive" insert -- means --.

Claim 1, line 6, change "and said image", to -- in said image --.

Claim 2, line 1, change "1", to -- 23 --.

Claim 3, line 4, change "treatment", to -- treatment/diagnosis --.

Claim 7, line 1, change "1", to -- 22 --.

Claim 7, line 2, delete "passive".

Claim 8, line 1, change "1", to -- 22 --.

Claim 8, line 3, delete "passive".

Claim 12, line 3, delete "passive".

Claim 14, line 1, change "1", to -- 22 --.

Claim 14, line 3, delete "passive".

15 (Amended). [The apparatus of Claim 14, wherein said] Apparatus responsive to movement of a patient positioned on a patient positioning assembly during treatment/diagnosis, said apparatus comprising:

camera means generating digital image signals representing an image of at least one fiducial on said patient; and

processing means comprising means responsive to actual shape, appearance and lighting conditions of said at least one fiducial in said image represented by said digital image signals to determine successive positions of said at least one fiducial, means repetitively determining movement of said at least one fiducial from said successive positions, and means generating an output in response to predetermined values of said movement;

said processing means further comprising means using a template to successively determine position of said at least one fiducial and means selecting said template [includes a] comprising display means, means generating on said display means an image of said at least one [passive] fiducial from said digital image signals and user interface means for selection of a template from said image of said at least one [passive] fiducial.

Claim 16, lines 1, 2, and 4, delete "passive".

Cancel Claim 18.

19. (Amended). Apparatus responsive to movement of a patient positioned on a patient positioning assembly, said apparatus comprising:

camera means generating digital image signals representative of an image of said patient; and

processing means comprising means determining movement of said patient from said digital image signals, including movement associated with breathing by said patient, and gating means generating gating signals synchronized with said movement associated with breathing by said patient [for actuating said beam generating means in synchronism with patient breathing].

Add the following new claims:

22. Apparatus responsive to movement of a patient positioned on a patient positioning assembly during treatment/diagnosis, said apparatus comprising:

a single camera generating digital image signals representing an image of at least one fiducial on said patient; and

processing means comprising means responsive to actual shape, appearance and lighting conditions of said at least one fiducial in said image represented by said digital image signals to determine successive positions of said at least one fiducial, means tracking three-dimensional movement of said at least one fiducial from said successive positions and means generating an output in response to predetermined values of said movement.

23. Apparatus responsive to movement of a patient positioned on a patient positioning assembly during treatment/diagnosis, said apparatus comprising:

camera means generating digital image signals representing an image of at least one fiducial on said patient; and

processing means comprising means responsive to actual shape, appearance and lighting conditions of said at least one fiducial in said image represented by said digital image signals to determine successive positions of said at least one fiducial at a rate of at least 20 Hz, means tracking movement of said at least one fiducial from said successive positions, and means generating an output in response to predetermined values of said movement. ——